



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,153	04/02/2001	Simon Jacobs	500741.01	2353
27076 7590 12/19/2006 DORSEY & WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT SUITE 3400 1420 FIFTH AVENUE SEATTLE, WA 98101			EXAMINER JARRETT, SCOTT L	
			ART UNIT 3623	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			12/19/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/825,153

Applicant(s)

JACOBS ET AL.

Examiner

Scott L. Jarrett

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 13-15, 20-26, 35 and 39-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 13-15, 20-26, 35 and 39-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/20/06, 7/14/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This **Final** Office Action is responsive to Applicant's amendment filed November 7, 2006. Applicant's amendment amended claims 11, 13-15, 20-26, 35 and 39-41 and canceled claims 1-10, 12, 16-19, 27-34, 36-38 and 42. Currently Claims 11, 13-15, 20-26, 35 and 39-41 are pending.

Response to Amendment

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

The 35 U.S.C. 112(2) rejection of Claims 1, 12-13, 21-24, 26 and 36-38 is withdrawn in response to Applicant's cancellation of claims 1, 12, 36-38 and amendments to claims 13, 21-24 and 26.

The Objection to Claims 12 and 39 is withdrawn in response to Applicant's cancellation of claim 12 and amendments to claim 39.

Response to Arguments

3. Applicant's arguments with respect to claims 11, 13-15, 20-26, 35 and 39-41 have been considered but are moot in view of the new ground(s) of rejection.

Regarding Applicant's argument that the prior art of record fails to teach or suggest having a rules structure which includes both fixed as well as configurable rules wherein the configurable rules alter the manner in which the schedule process operates (executes; Remarks filed November 7, 2006, Page 8) the examiner refers to the Applicant's specification for clarification as to the definition and function of the fixed and configurable rules; specifically the specification states:

- "Thus, although the service organization cannot modify the algorithm itself, through the use of programmable rules and constants, the service organization is provided with a mechanism by which the operation of the negotiation, assignment and optimization algorithms 216, 220 and 224 of the schedule system 200 may be customized or configured to the particular needs of the service organization using the scheduling system 200." (Lines 2-8, Page 7);
- "The same language convention could be used for the fixed business rules and constraint set as well, except that fixed business rules are inaccessible by the service organization." (Lines 20-22, Page 8);
- "Constants, as briefly discussed above, allow a service organization to control the flow of execution within the rules." (Lines 2-3, Page 16);
- "The order candidacy rule (R:OrderCandidacy) describes the conditions under which an order can be automatically assigned by the scheduling system to a mobile user." (Lines 16-8, Page 18); and

- "The mobile user candidacy rule (R:UserCandidacy) describes the conditions under which a mobile user can be automatically assigned orders." (Lines 13-15, Page 19).

Further it is noted that the applicant did not challenge the Official Notice(s) cited in the First Office Action therefore those statements as presented are herein after prior art. Specifically it has been established that it was old and well known in the art at the time of the invention:

- to assign a variable (custom, unique) label to a rule (set of rule, constraints, parameters, etc.) as a means for identifying, managing, accessing, and manipulating rules (data, constants, constraints, etc.);
- to use delimiters (text or otherwise) as a means for visually or programmatically distinguishing (identifying) a plurality of parts (sections, operators, modules, etc.); and
- to include a set operator as part of a rules/inference engine as a means for grouping information (data, elements, etc.) of interest.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11 and 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 11, Claim 11 recites the limitation "**the fixed constraint set**" in Claim 11. There is insufficient antecedent basis for this limitation in the claim. Examiner interpreted the claim to read "**a fixed constraint set**" for the purposes of examination. Appropriate correction is required.

Regarding Claim 14, Claim 14 recites the limitation "**the first set of rules**" in Claim 13. There is insufficient antecedent basis for this limitation in the claim. Examiner interpreted the claim to read "**a first set of rules**" for the purposes of examination. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11, 13-15, 20-26, 35 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broderon et al., U.S. Patent No. 6,850,895 in view of Wolfinger et al., U.S. Patent No. 6,415,259.

Regarding Claims 11 and 20 Broderon et al. teach a scheduling system and method comprising:

- programming (defining, inputting, entering, setting, etc.) a programmed constraint set of candidacy rules and constraints (policies, criteria, "assignment criteria values", "assignment rules", "workload rules", "assignment options", "assignment attributes", "workload conditions") for scheduling (assigning, dispatching, tasking, etc.) orders (work, tasks, activities, assignments, etc.) to a worker (user) including a user candidacy rule (technician, worker, staff, entity, workforce etc.) that controls which workers are considered, and an assignment rule that controls whether an order can be assigned to a worker (Column 1, Lines 56-68; Column 2, Lines 1-40; Column 3, Lines 1-41; Column 4, Lines 1-22; Column 6, Lines 3-18; Column 7, Lines 5-42; Figures 1, 2, 6, 10);

Art Unit: 3623

- a fixed constraint set including fixed rules (policies, schedule/assignment options/pick list of workload/assignment rules – “Round Robin”, “Best Fit”) and the programmed constraint set having user configurable rules and a set of programmable constants controlling the flow of execution of the rules (Column 7, Lines 5-42; Column 8, Lines 53-68; Column 9, Lines 56-68; Column 10, Lines 1-25; Figures 1-2, 6, 10).

- executing the scheduling process in accordance with the fixed constraint set (Column 13, Lines 40-68; Column 14, Lines 1-68; Column 15, Lines 1-39; Figure 10);
and

- altering execution of the scheduling process according to the fixed constraint set in accordance with the configurable rules and programmable constants (“Exclusive” tasks, default assignment, round robin vs. best fit assignment, “maximum workload”, “minimum score”, required checkbox; Column 10, Lines 1-19; Column 13, Lines 40-68; Column 14, Lines 1-68; Column 15, Lines 1-39; Figure 10).

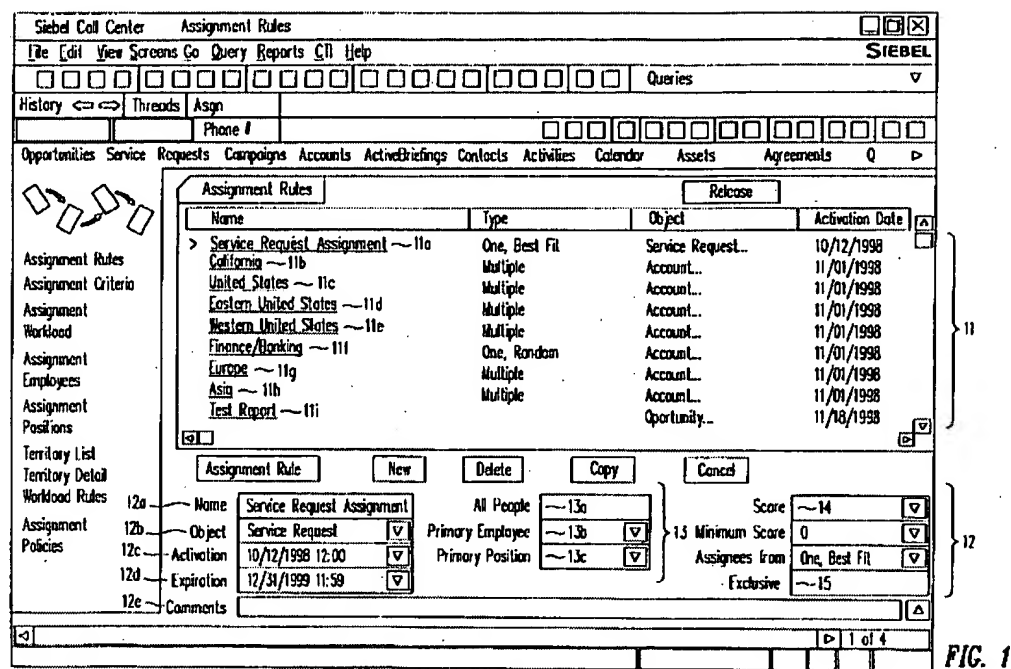


FIG. 1

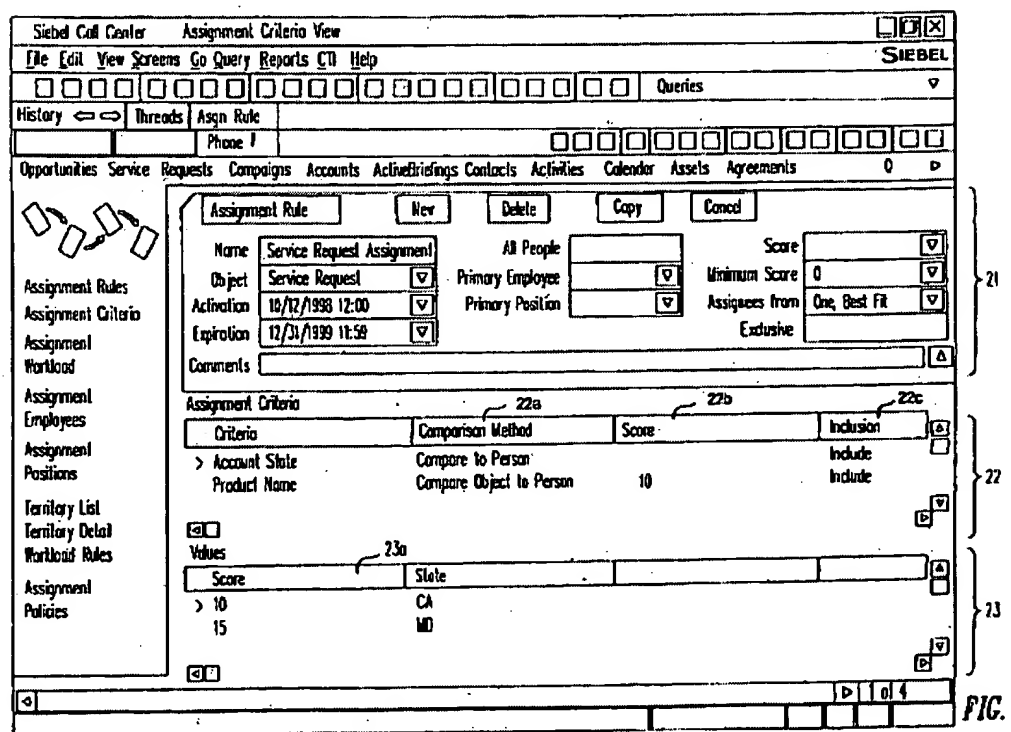


FIG. 2

Art Unit: 3623

Siebel Call Center Workload Rule

File Edit View Screens Go Query Reports Help

History Threads Workload Queries

Opportunities Service Requests Campaigns Accounts ActiveBriefings Contacts Activities Calendar Assets Agreements 0

Workload Rules

Name	Assignment Object
> Critical Service Requests	Service Request
Total Service Requests	Service Request
High Quality Leads	Opportunity

Workload Conditions

Field	Comparison	Value
> Service Request Status	:	Open
Service Request Severity	/	1-Critical
61a	61b	61c

Assignment Rules
Assignment Criteria
Assignment Workload
Assignment Employees
Assignment Positions
Territory List
Territory Detail
Workload Rules
Assignment Policies

FIG. 6

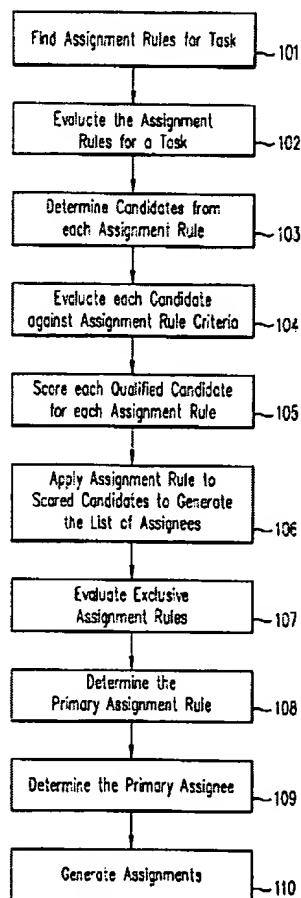


FIG. 10

Art Unit: 3623

While Broderson et al. teach scheduling (assigning, allocating) orders to workers based on a plurality of constraints (factors) Broderson et al. does not expressly teach order candidacy rules that control which orders are considered for scheduling as claimed.

Wolfinger et al. teach order candidacy rules that control which orders are considered for scheduling (order priority, customer value, due date, cost minimization, tightness, customer value, dependency, location; Column 1, Lines 1-66; Column 2, Lines 15-18; Column 3, Lines 40-48, 63-68; Column 4, Lines 7-21; Column 16, Lines 13-, 35, 47-68; Figures 4, 6-8) in an analogous art of assigning and scheduling orders to workers for the purposes of optimizing the scheduling/assignment of orders to workers based on a plurality of hard and soft (fixed/configurable constraints) candidacy rules/constraints including but not limited to order priority and/or customer value (Column 2, Lines 15-18).

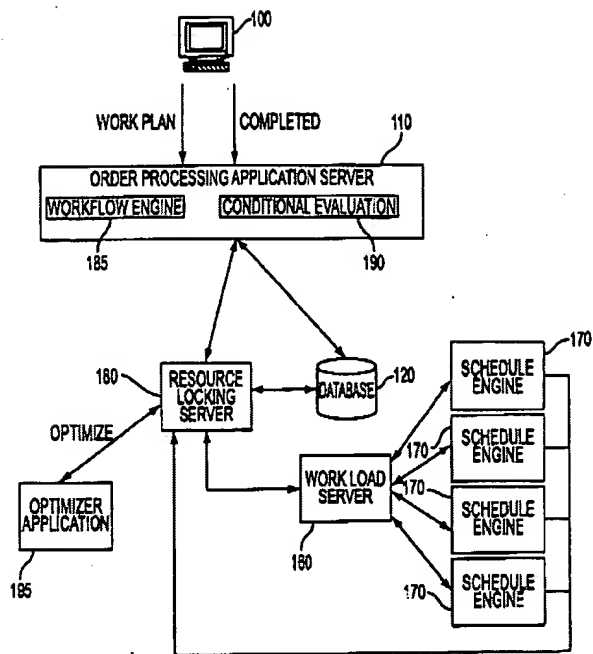


FIG. 4

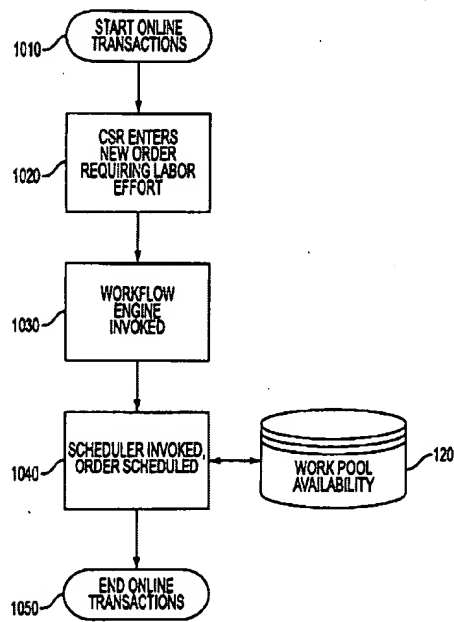


FIG. 6

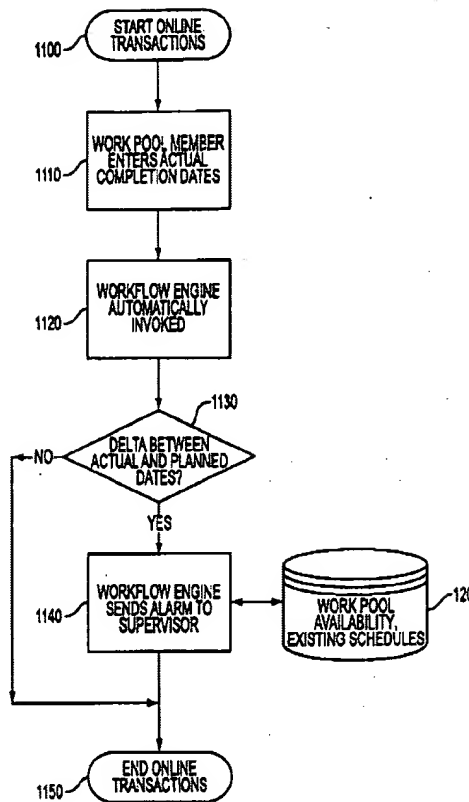


FIG. 7

It would have been obvious to one skilled in the art at the time of the invention that the system and method for assigning and scheduling orders to workers as taught by Broderson et al. would have benefited from including order assignment candidacy rules in view of the teachings of Wolfinger et al.; the resultant system/method enabling users to optimize the scheduling/assignment of orders to workers based on a plurality of hard and soft (fixed/configurable constraints) candidacy rules/constraints including but not limited to order priority and/or customer value (Wolfinger et al.: Column 2, Lines 15-18).

Regarding Claim 13 Broderon et al. teach a scheduling system and method further comprising translating (mapping, converting, transforming, etc.) the user configurable rules from a defined configurable rule language/convention into a predefined grammar (Column 5, Lines 14-17).

Regarding Claims 14 and 25 Broderon et al. teach a scheduling system and method wherein translating the user configurable rules comprises compiling a (first) set of rules into a library (collection, repository, database, list, class, installation package, system wide assignment rules, etc.) that is used (referenced, accessed, etc.) when the schedule process is performed (Column 5, Lines 14-17; Column 7, Lines 27-51; Figure 7).

Regarding Claim 15 Broderon et al. teach a scheduling system and method wherein executing the scheduling process further comprising performing the scheduling process according to a standard process (algorithm, template, pre-defined, global/system-wide assignment rules) except where the programmed user configurable rules (constraints, attributes, settings, criteria) have altered performance of the scheduling process to a reconfigured process (Column 7, Lines 27-43; Column 8, Lines 54-68; Column 9, Lines 66-68; Column 10, Lines 1-25; Column 13, Lines 33-68; Column 14, Lines 1-68; Column 15, Lines 1-38; Figures 2-3, 10).

Art Unit: 3623

Regarding Claim 21 Broderon et al. teach a scheduling system and method wherein execution of the scheduling process includes invoking the fixed and configurable rules from a negotiation algorithm (steps, process; Column 1, Lines 35-68; Column 5, Lines 21-30; Assignment Engine – Steps 1-4, Columns 13-14; Figure 10).

Regarding Claims 22-24 Broderon et al. teach a scheduling system and method further comprising executing assignment, optimization and negotiation algorithms (steps, process) in accordance with the fixed rules as altered by the configurable rules to schedule orders to a worker (Column 3, Lines 1-68; Column 4, Lines 1-23; Column 10, Lines 1-19; Column 13, Lines 40-68; Column 14, Lines 1-68; Column 15, Lines 1-39; Figures 1-2, 6, 10).

Regarding Claim 26 Broderon et al. teach a scheduling system and method comprising:

- an negotiation algorithm for the reservation of work orders, an assignment algorithm for assigning orders to workers, and a set of rules invoked by the algorithms to govern the execution of the algorithms, the rules including user and assignment candidacy rules having business rules augmented by programmable rules for altering the execution of the algorithms (Column 1, Lines 56-68; Column 2, Lines 1-40; Column 3, Lines 1-41; Column 4, Lines 1-22; Column 6, Lines 3-18; Column 7, Lines 5-42; Figures 1, 2, 6, 10); and

Art Unit: 3623

- executing the algorithms in accordance with the set of rules (Column 10, Lines 1-19; Column 13, Lines 40-68; Column 14, Lines 1-68; Column 15, Lines 1-39; Figures 1-2, 6, 10).

While Broderson et al. teach scheduling (assigning, allocating) orders to workers based on a plurality of constraints (factors) Broderson et al. does not expressly teach order candidacy rules that control which orders are considered as claimed.

Wolfinger et al. teach order candidacy rules that control which orders are considered (order priority, customer value; Column 1, Lines 1-66; Column 2, Lines 15-18; Column 3, Lines 40-48, 63-68; Column 4, Lines 7-21; Column 16, Lines 13-, 35, 47-68; Figures 4, 6-8) in an analogous art of assigning and scheduling orders to workers for the purposes of optimizing the scheduling/assignment of orders to workers based on a plurality of hard and soft (fixed/configurable constraints) candidacy rules/constraints including but not limited to order priority and/or customer value (Column 2, Lines 15-18).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for assigning and scheduling orders to workers as taught by Broderson et al. would have benefited from including order assignment candidacy rules in view of the teachings of Wolfinger et al.; the resultant system/method enabling users to optimize the scheduling/assignment of orders to workers based on a plurality of hard and soft (fixed/configurable constraints) candidacy rules/constraints including but

Art Unit: 3623

not limited to order priority and/or customer value (Wolfinger et al.: Column 2, Lines 15-18).

Regarding Claim 35 Broderon et al. teach a scheduling system and method comprising:

- scheduling an order (assignment, task, work order, etc.) into the shift (schedule, calendar, etc.) of a working according to a constraint set having user and assignment candidacy rules, fixed and user configurable, and a set of constants (Column 2, Lines 37-39; Column 1, Lines 56-68; Column 2, Lines 1-40; Column 3, Lines 1-41; Column 4, Lines 1-22; Column 6, Lines 3-18; Column 7, Lines 5-42; Figures 1, 2, 6, 10); and
- configuring the user configurable rules to change the act of scheduling from scheduling according to the fixed rules to scheduling in accordance with the fixed and user-configurable rules, the execution of which is controlled by constants (Column 3, Lines 1-68; Column 4, Lines 1-23; Column 10, Lines 1-19; Column 13, Lines 40-68; Column 14, Lines 1-68; Column 15, Lines 1-39; Figures 1-2, 6, 10).

While Broderon et al. teach scheduling (assigning, allocating) orders to workers based on a plurality of constraints Broderon et al. does not expressly teach order candidacy rules that control which orders are considered as claimed.

Art Unit: 3623

Wolfinger et al. teach order candidacy rules that control which orders are considered (order priority, customer value; Column 1, Lines 1-66; Column 2, Lines 15-18; Column 3, Lines 40-48, 63-68; Column 4, Lines 7-21; Column 16, Lines 13-, 35, 47-68; Figures 4, 6-8) in an analogous art of assigning and scheduling orders to workers for the purposes of optimizing the scheduling/assignment of orders to workers based on a plurality of hard and soft (fixed/configurable constraints) candidacy rules/constraints including but not limited to order priority and/or customer value (Column 2, Lines 15-18).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for assigning and scheduling orders to workers as taught by Broderson et al. would have benefited from including order assignment candidacy rules in view of the teachings of Wolfinger et al.; the resultant system/method enabling users to optimize the scheduling/assignment of orders to workers based on a plurality of hard and soft (fixed/configurable constraints) candidacy rules/constraints including but not limited to order priority and/or customer value (Wolfinger et al.: Column 2, Lines 15-18).

Regarding Claim 39 Broderson et al. teach a scheduling system and method further comprising programming a rule to provide a score when comparing a worker to an order (Column 2, Lines 30-36; Column 3, Lines 1-65; Column 9, Lines 30-36; Column 10, Lines 6-33; Column 14, Lines 27-46).

Art Unit: 3623

Regarding Claim 40 Broderon et al. teach a scheduling system and method further comprising programming a set of constants to control the flow of execution within the fixed and configurable rules, the constants replacing global (default, standard) constants (template, pre-defined, global/system-wide assignment rules; Column 7, Lines 27-43; Column 8, Lines 54-68; Column 9, Lines 66-68; Column 10, Lines 1-25; Column 13, Lines 33-68; Column 14, Lines 1-68; Column 15, Lines 1-38; Figures 2-3, 10).

Regarding Claim 41 Broderon et al. teach a scheduling system and method further comprising scheduling an order comprising negotiation of a reservation, assigning the reservation and optimizing the reservation (order, assignment; Column 1, Lines 35-68; Column 2, Lines 1-47; Columns 13-15, Steps 1-10).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Collins et al., U.S. Patent No. 5,763,953, teach a system and method for scheduling and assigning workers (resource providers) to orders (resource requests) including field service technicians utilizing fixed and configurable rules (policies, predefined criteria) and constraints (constants).

- Chatterjee et al., U.S. Patent No. 5,774,661, teach a system and method for defining configurable workflow rules comprising user configurable rules as well as the translation of generic/generalized rules.

- Kruse et al., U.S. Patent 5,590,269, teach a scheduling system and method for utilizing a combination of well known optimization, artificial intelligence and constraint-based algorithms to negotiate, assign and schedule orders to workers (field service personnel).

- Sorkin et al., U.S. Patent No. 6,484,026, teach a scheduling system and method for optimizing the assignment and scheduling of orders to workers utilizing a combination of hard/soft constraints (fixed/configurable) and other order/resource data.

- Tuatini et al., U.S. Patent Publication No. 2001/0029499, teach a rule processing system and method, which enables users/systems to utilizing two or more rule engines.

- Collins et al., Automated Assignment and Scheduling of Service Personnel (1994), teach a system and method for optimizing the scheduling and assignment of workers to orders comprising order, user and assignment candidacy rules/constraints, user configurable rules/constraints (organization policies, call priority) as well as hard/soft constraints).

- Lesaint D. et al., Dynamic Workforce Management (1997), teach a system and method for assigning and scheduling orders to workers based on user-configurable business rules and well-known scheduling algorithms.

- Guido et al., Work Force Management (WFM) Issues (1998), teach a system and method (RAPID) for scheduling and assigning orders to workers comprising business rules/policies (legal, technical, human, contractual, organization) and well known assignment/allocation algorithms. Guido et al. further teaches that it is common

Art Unit: 3623

that "off-the-shelf" resource allocation products, such as ILOG Scheduler, need to be customized/tailored to meet the needs/requirements of the target organization wherein the customization process includes defining the constraints (parameters) to be utilized in the optimization algorithms.

- Bisio et al., Effective Resource Scheduling in Work Force Management

Context for Telecommunication Work Centers (1999), teach a scheduling system and method (RAPID) for scheduling and assigning orders to workers based on a plurality of constraints and characteristics of the domain (field of use) for the system/method. Bisio et al. further teach the utilization of fixed and user configurable rules/constraints that alter the execution of the scheduling process (Bottom, Page 4; emphasis added).

"Functionalities provided by ARCO are implemented by means of a variety of algorithms, that can be applied according to the type of event causing the agendas revision. These algorithms differ in the **selection/filtering/evaluation criteria plugged in well defined steps of common algorithm schema**. The basic algorithm in facts implements a heuristic search in the state space where each state consists of the set of activities to assign and the agendas (i.e.: the assigned and current activities, resources constraints the possible states). Backtracking has been limited to a very small portion of the problem. The domain knowledge, not expressed as hard constraints, has been translated in the criteria mentioned before. The **criteria, that characterize each algorithm, create different candidate ways to transform a state of the search in the next state and influence the way candidates are evaluated**. The global behavior can still be influenced both by **settings flags, weights and thresholds defined for criteria** and by allowing supervisor's intervention over decisions taken by ARCO.

More specifically, criteria are relevant to the selection of activities and resources. *Selecting an activity means that involved criteria must take into account* the following aspects:

- priority;
- presence of outplant activities;
- long activities;
- time constraints;
- distances;
- resource constraints;
- related activities;
- goals (different targets for different types of activities).

Selecting a resource means that involved criteria must deal instead with these other aspects:

- specialization and skill;

Art Unit: 3623

- balancing load;
- travel;
- starting as soon as possible;
- team management.

Constraint satisfaction techniques offered by Ilog libraries have been heavily used whenever necessary to handle *symbolic constraints*, such as in the case of agenda revisions caused by urgent activities and activities on appointments: in both cases, agendas need in fact to be revised in order to allow for the appropriate assignment of the involved activity and revisions must of course still satisfy *preestablished constraints*."

- Lesaint D. et al., Dynamic Workforce Scheduling for British

Telecommunications plc (2000), teach a scheduling system and method for assigning and dispatching orders to workers based on a plurality of rules/constraints (constraint-based scheduler) including order, assignment and user candidacy rules wherein "The user has to select a few heuristics to "drive" the prescheduler; for example, to order jobs based on priority, urgency, or skill levels. Regarding the simulated annealing algorithm, the user can configure the cost function through intuitive parameters, for example, a penalty for minutes spent on travel or a weight to balance the importance of one task category over another." (Column 1, Paragraph 1, Page 52)

- Jing et al., WHAM (2000), teach a system and method for assigning and scheduling orders to mobile workers comprising global and local rules/constraints, which determine what orders and workers, are considered for scheduling/assignment.

- MDSI-Advantex.com Web Pages (1999), teaches a commercially available system and method for negotiating, assigning and scheduling orders to workers based on a plurality of user-configurable constraints, rules and criteria (order scheduling system, workload distribution system, appointment scheduling; priority, required skills, service area, travel time, loading, labor cost, etc.).

Art Unit: 3623

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


SJ

12/13/2006


TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3000